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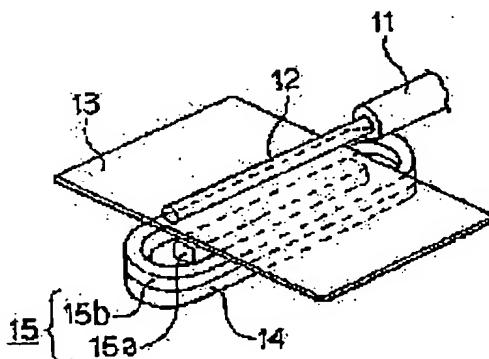
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(54) MICROWAVE PLASMA GENERATING DEVICE

(57)Abstract:

PURPOSE: To realize a microwave plasma generating device, which can form an even thin film on a substrate at a large area at a high speed by providing a substrate, which is moved in the vertical direction in relation to an antenna and a magnetic field tunnel, between an antenna for radiating microwave and a toroidal-type magnetic field tunnel.

CONSTITUTION: A linear antenna 12 is provided in a coaxial connector 11, and microwave, for example, at 2.45 GHz is led from the coaxial connector 11 to the linear antenna 12. A rectangular substrate 13 is provided under the linear antenna 12, and furthermore, a permanent magnet 15 held by a yoke 14 is arranged under the rectangular substrate 13. The permanent magnet 15 is formed of a bar-like permanent magnet 15a in parallel with the linear antenna 12 and a permanent magnet 15b surrounding the permanent magnet 15a with an equal space. A surface of each permanent magnet 15a, 15b, which faces to the rectangular substrate 13, is magnetized, and the permanent magnet 15a is formed into S-pole, and the permanent magnet 15b is formed into N-pole.



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